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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/678,782	10/03/2003	Richard R. Roesler	PO-7926/MD-99-44	3887

157 7590 09/26/2006

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EXAMINER	
TRUONG, DUC	

ART UNIT	PAPER NUMBER
1711	

DATE MAILED: 09/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/678,782	ROESLER ET AL.	
	Examiner	Art Unit	
	Duc Truong	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 July 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Applicant's arguments filed 7/31/06 have been fully considered but they are not persuasive. The response submitted by Applicant does not overcome the rejection made by Examiner in the last Office action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wicks'012 (5,243,012) or Zwienner'741 (5;236,741) or '170 (5,126,170).

Wicks discloses a polyurea coating composition comprising at least one compound of the formula (I) by reacting primary polyamines of formula (II) with maleic or fumaric acid esters of formula (III) under cited conditions (See col. 4, line 50 et seq., col. 5, lines 7-47) in that they are identical with step (A) in the claimed process 2.

The reference further discloses a coating composition comprising a polyisocyanate (see Abstract, col. 1, line 47 et seq.) and said compound, as stated above, to form a binder (see col. 6, line 23 et seq.), polyurethane and polyurea coatings---(see col. 6, line 65 et seq,).

Zwienner'741 or '170 discloses an isocyanate reactive component containing at least one compound of the formula (I) by reacting primary amines (II) with maleic or fumaric acid esters of formula (III) under cited conditions (see col. 4, line 38 et seq. of

'741; col. 4, line 31 et seq. of '170; col. 5, lines 4-20 of '741; col. 4, line 64 et seq. of '170), in that they are identical with step (A) in the claimed process 2.

The references further disclose a process for the production of polyurethane coatings, binders (see col. 6, line 1 of '741; col. 5, line 60 of '170) using said component.

The disclosures of the references differ from the instant claims in that they do not disclose the claimed formula derived from the reaction products of primary amines with maleic or fumaric acid esters then with an oxirane compound comprising alkylene oxide.

However, the references do disclose the reaction products of primary amines with maleic or fumaric acid esters under the same conditions. Further, the references do disclose the use of polyether polyols produced by the alkoxylation of starting materials, and suitable for the preparation of the isocyanate group containing prepolymer and semi-prepolymers, comprising alkylene oxide such as ethylene and/or propylene oxide which may be introduced into the alkoxylation in any sequence or as a mixture (see Wicks, col. 4, lines 28-41; col. 3, line 60 onto col. 4, line 4 of '741; col. 3, lines 53-65 of '170).

Therefore, it would have been obvious to one of ordinary skill in the art to react the reaction products of primary amines with maleic or fumaric acid esters then with alkylene oxide to form the aspartate of the claimed formula, for the reasons as stated above, in the absence of a showing of unexpected results derived from said selection.

Response to Argument

Applicant's arguments are characterized as based on the claimed step (B), in that the polyhydroxy compounds of the references are used to make isocyanate group containing prepolymers with polyisocyanates and do not react with the resulting product in the claimed step (A) in claim 2.

Note that the aspartate of the claimed formula is derived from the process of claim 2.

Note also that the references do disclose the required reactants and the process conditions in the claimed step (A). Therefore, the question is whether ethylene oxide or propylene oxide can react with the resulting product of step A.

Note that the references do disclose "polyether polyols are obtained by the alkoxylation of suitable materials and are suitable for the preparation of the isocyanate group containing prepolymers and semi-prepolymers---ethylene oxide and propylene oxide are suitable alkylene oxides for the alkoxylation reaction. These alkylene oxides may be introduced into the alkoxylation reaction in any sequence or as a mixture (see col. 4, lines 29-42 of '012; col. 3, line 60 onto col. 4, line 4 of '742; col. 3, lines 53-65 of '170). In the case if the amount of alkylene oxides used to form polyether polyols is in excess, after forming polyether polyols, the remaining alkylene oxides can react with the resulting product of step (A) .

Note that the references further disclose that "the prepolymers and semi-prepolymers may suitably be prepared from low MW polyhydroxy compound such as polyethylene glycol, propylene glycol---, low MW ethoxylation and/or propoxylation products of these polyols(see col. 3, line 63 et seq. of Wicks; col. 3, lines 27-35 of '741; col. 3, lines 20-28 of '170) in that ethylene glycol and propylene glycol can be used as reactants to form

prepolymers and semi-prepolymers. The use of the term "prepolymers or semi-prepolymers means the alkylene oxides can react with another component in any steps of the process, including steps A and B.

Applicant is correct in stating that the process of making polyether polyols from polyamine/polyol and alkylene oxides is well known in the art. Further, Applicant also states that there is no alkylene oxide remaining in a polyether polyol product because alkylene oxides are extremely toxic and reactive material. However, said arguments have been fully considered but they are not persuasive since they are not commensurate in scope with the claims. The claimed process 2 neither discloses reactants nor molar ratios to form polyether polyols. How does Applicant know that there is no residual alkylene oxide after forming polyether polyols?
In the response to the Office action, mechanisms have been provided to show the reactants and the steps of the processes to form the products, in the claims and in the references.
In the references, if the oxirane such as alkylene oxides is used in excess, after forming the polyether polyol in step (1) then the remaining oxirane will react with the resulting product of step (A) or intermediate (3) to form the claimed aspartate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc Truong whose telephone number is 571-272-1081. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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DUC TRUONG
PRIMARY EXAMINER